

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

2520 Venture Oaks Way, Suite 350

Sacramento, CA 95833

(916) 274-5721

FAX (916) 274-5743

Website address www.dir.ca.gov/oshsb**NOTICE OF PROPOSED MODIFICATIONS TO
CALIFORNIA CODE OF REGULATIONS**

TITLE 8: Chapter 4, Subchapter 7, Article 4, Section 3273 of the General Industry Safety Orders

Protection from Falling Objects

Pursuant to Government Code Section 11346.8(c), the Occupational Safety and Health Standards Board (Standards Board) gives notice of the opportunity to submit written comments on the above-named regulations in which further modifications are being considered as a result of public comments and/or Board staff evaluation.

On October 17, 2002, the Standards Board held a Public Hearing to consider revisions to Title 8, Sections 1513 and 3273 of the General Industry Safety Orders, California Code of Regulations. The Standards Board received written and oral comments on the proposed revisions. The regulations have been further modified as a result of the comments and Board consideration.

A copy of the full text of the regulation as originally proposed, and a copy of the modified text clearly indicating the further modifications, is attached for your information. In addition, a summary of all oral and written comments regarding the original proposal and staff responses is included.

Any written comments on these modifications must be received by 5:00 p.m. on April 28, 2003 at the Occupational Safety and Health Standards Board, 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833. These regulations will be scheduled for adoption at a future business meeting of the Standards Board.

The Standards Board's rulemaking files on the proposed action are open to public inspection Monday through Friday, from 8:00 a.m. to 4:30 p.m., at the Standards Board's office at 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833.

Inquiries concerning the proposed changes may be directed to the Staff Services Manager I, Marley Hart at (916) 274-5721.

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Date: April 8, 2003

Marley Hart, Staff Services Manager I

REGULATIONS AS ORIGINALLY PROPOSED

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Amend CSO Section 1513(g) to read:

§ 1513. Housekeeping.

(g) Prevention of objects from falling, and methods of lowering objects ~~Waste, materials, or tools shall not be thrown from buildings or structures to areas where employee(s) may be located, unless the area where the material falls is guarded by fences, barricades, or other methods/means to prevent employee(s) from entering and being struck by falling objects. Signs shall be posted to warn employees of the hazard shall be in accordance with provisions of General Industry Safety Orders, Section 3273.~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend GISO Section 3273 to read:

§ 3273. Working Area.

(a) Permanent floors and platforms shall be free of dangerous projections or obstructions, maintained in good repair, and reasonably free of oil, grease, or water. Where the type of operation necessitates working on slippery floors, such surfaces shall be protected against slipping by using mats, grates, cleats, or other methods which provide equivalent protection. Where wet processes are used drainage shall be maintained and false floors, platforms, mats, or other dry standing places provided.

(Title 24, Part 2, Section 2-2304(f))

(b) Permanent roadways, walkways, and material storage areas in yards shall be maintained free of dangerous depressions, obstructions, and debris.

(c) Platforms, runways, ramps, or other elevated working levels, except catwalks, that are 30 inches or more above the floor, ground, or other working area shall be no less than 2 feet wide and have no less than 6 1/2 feet clear headroom. In existing installations where an overhead hazard exists due to clearances of less than 6 1/2 feet above ramps, runways, platforms, or other elevated work areas, such work area shall be relocated and the obstruction removed. If these procedures are impracticable, a suitable warning shall be placed near the obstruction to notify employees of its presence. Where the nature of the hazard is such that padding will increase safety, it shall be installed.

(Title 24, Part 2, Section 2-3320(h)(1))

(d) Catwalks shall be no less than 18 inches wide and have 6 1/2 feet clear headroom. When installed along inclined conveyors, crane booms, etc., where because of structural or load conditions it is unreasonable to comply with basic ramp standards, catwalks may have a slope exceeding 18 degrees.

(Title 24, Part 2, Section 2-3320(h)(2))

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EXCEPTIONS:

1. When required location dictates, a catwalk may have less overhead clearance if a warning and padding are provided as in (c).

2. In bowling alleys at pin-spotting and pin-setting machines, catwalks shall be no less than nominal 8 inches wide and provided with an adequate handrail if the sides are not protected by another structure.

(e) Preventing objects from falling:

(1) Where there is employee exposure below an elevated work area, all objects, including materials, equipment and tools shall be secured against accidental displacement when not in use unless provisions, such as but not limited to effective physical barriers and warning signs at the perimeter of the affected work area below, are made to ensure the safety of those exposed to being struck by a falling object.

(2)-(e) Where the type of process or operation, exclusive of repair and maintenance, is such that there are hazards to employees from materials falling through platform or runway openings, the openings shall be limited to a size that prevents materials falling through the openings.

(Title 24, Part 2, Section 2-3906)

(3)-(f) Where platform or runway gratings are used as work areas during repair or maintenance, there shall be provided at such areas suitable safeguards to prevent tools or materials falling on employees below. Such safeguards may be netting suspended below the work area, canvas, planking on the surface of the grating, or barricaded or sheltered areas below the work area.

(f) Lowering objects:

(1) Where there is employee exposure below an elevated work area, all objects, including materials, equipment and tools shall be lowered in a controlled manner, such as but not limited to using enclosed chutes, material handling equipment, or hand lines.

(2) When controlled lowering is not practical, or would subject employees and/or the general public to a greater risk of injury, protection from falling objects shall be provided by the use of effective physical barriers, such as but not limited to overhead protection, fencing, or barrier tape when the barrier is attended by authorized employees ("spotters") that are on the same level as the area of exposure and who are authorized to effectively restrict entry into the area or other equivalent means or methods.

(3) Signs in accordance with Section 3340 shall be posted at the perimeter of the affected work area to warn employees of the hazard from falling objects.

(g) Where it is necessary to lubricate or adjust prime movers, machines, or equipment, which extends below the floor line, sufficient work space shall be provided for the safe performance of the work.

(h) Permanently installed prime movers, machines, and equipment shall be located and guarded so that transported material does not strike either the moving parts of machines or the employees at their operating positions.

(i) Machines or equipment shall be located and guarded so that the product, waste stock, or material being worked or processed does not endanger employees.

(j) Where machinery or equipment is installed in a pit and there are shear hazards between the pit edges and parts of the machine or equipment, skirt guards shall be installed to remove such

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hazards, or such other device used to provide equivalent protection.

(k) Every shop transfer car and equipment carriage operating on rails, together with their loads, shall clear stationary machines, equipment, structures, or piled or stacked material, by at least 24 inches.

(l) Ditches, pits, excavations and surfaces in poor repair shall be guarded by readily visible barricades, rails or other equally effective means.

(m) Existing installations having impaired clearances shall be well posted to indicate the hazards due to such impaired clearance, and shall be guarded by guardrails, barricades, or other means.

EXCEPTIONS:

1. Inaccessible monorails, conveyors, and similar equipment operating on rails.
2. Transfer cars or carriages where the process is such that a minimum of clearance is necessary for safe operations.

NOTE: Authority cited: Section 142.3, Labor Code. Reference Section 142.3, Labor Code; and Section 18943(c), Health and Safety Code.

PROPOSED MODIFICATIONS
(Modifications are indicated by
bold, underline wording for new language,
and **~~bold, strikeout~~** for deleted language.)

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~~**Amend CSO Section 1513(g) to read:**~~ [Proposed amendments to 1513(g) are withdrawn.]

Amend GISO Section 3273**(e) and (f)** to read:

§ 3273. Working Area.

(a) Permanent floors and platforms shall be free of dangerous projections or obstructions, maintained in good repair, and reasonably free of oil, grease, or water. Where the type of operation necessitates working on slippery floors, such surfaces shall be protected against slipping by using mats, grates, cleats, or other methods which provide equivalent protection. Where wet processes are used drainage shall be maintained and false floors, platforms, mats, or other dry standing places provided.

(Title 24, Part 2, Section 2-2304(f))

(b) Permanent roadways, walkways, and material storage areas in yards shall be maintained free of dangerous depressions, obstructions, and debris.

(c) Platforms, runways, ramps, or other elevated working levels, except catwalks, that are 30 inches or more above the floor, ground, or other working area shall be no less than 2 feet wide and have no less than 6 1/2 feet clear headroom. In existing installations where an overhead hazard exists due to clearances of less than 6 1/2 feet above ramps, runways, platforms, or other elevated work areas, such work area shall be relocated and the obstruction removed. If these procedures are impracticable, a suitable warning shall be placed near the obstruction to notify employees of its presence. Where the nature of the hazard is such that padding will increase safety, it shall be installed.

(Title 24, Part 2, Section 2-3320(h)(1))

(d) Catwalks shall be no less than 18 inches wide and have 6 1/2 feet clear headroom. When installed along inclined conveyors, crane booms, etc., where because of structural or load conditions it is unreasonable to comply with basic ramp standards, catwalks may have a slope exceeding 18 degrees.

(Title 24, Part 2, Section 2-3320(h)(2))

EXCEPTIONS:

1. When required location dictates, a catwalk may have less overhead clearance if a warning and padding are provided as in (c).

2. In bowling alleys at pin-spotting and pin-setting machines, catwalks shall be no less than nominal 8 inches wide and provided with an adequate handrail if the sides are not protected by another structure.

(e) Protection Preventing objects from falling objects:

- (1) Where there is employee exposure below an elevated work area, all objects, including materials, equipment and tools shall be secured against accidental displacement when not in use unless one or more of the following safeguards shall be implemented: provisions, such as but not limited to effective physical barriers and warning signs at the perimeter of the affected work area below, are made to ensure the safety of those exposed to being struck by a falling object.
- (A) Provide toeboards, screens, or guardrail systems in accordance with other**

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sections of these orders to prevent objects from falling from higher levels; or,
(B) Provide a canopy structure to protect from falling objects; or,
(C) Provide a physical barrier such as, but not limited to, fencing, barricades or
other equivalent means or methods, to prevent entry into the area to which
objects could fall.

~~(2)-(e)~~ Where the type of process or operation, exclusive of repair and maintenance, is such that there are hazards to employees from materials falling through platform or runway openings, the openings shall be limited to a size that prevents materials falling through the openings.

~~(Title 24, Part 2, Section 2-3906)~~

~~(3)-(f)~~ Where platform or runway gratings are used as work areas during repair or maintenance, there shall be provided at such areas suitable safeguards to prevent tools or materials falling on employees below. Such safeguards may be netting suspended below the work area, canvas, planking on the surface of the grating, or barricaded or sheltered areas below the work area.

~~(f)~~ Lowering objects:

~~(1)~~ Where there is employee exposure below an elevated work area, all objects, including materials, equipment and tools shall be lowered in a controlled manner, such as but not limited to using enclosed chutes, material handling equipment, or hand lines; **or,**

~~(2)~~ When controlled lowering is not practical, or would subject employees **and/or the general public** to a greater risk of injury, protection from falling objects shall be provided by the use of effective physical barriers, such as but not limited to **canopies overhead protection, fencing, barricades, or barrier tape when the barrier is attended by authorized employees ("spotters") that are on the same level as the area of exposure and who are authorized to effectively restrict entry into the area** or other equivalent means or methods.

~~(A)(3)~~ Signs in accordance with Section 3340 shall be posted at the perimeter of the affected work area to warn employees of the hazard **from falling objects.**

(g) Where it is necessary to lubricate or adjust prime movers, machines, or equipment, which extends below the floor line, sufficient work space shall be provided for the safe performance of the work.

(h) Permanently installed prime movers, machines, and equipment shall be located and guarded so that transported material does not strike either the moving parts of machines or the employees at their operating positions.

(i) Machines or equipment shall be located and guarded so that the product, waste stock, or material being worked or processed does not endanger employees.

(j) Where machinery or equipment is installed in a pit and there are shear hazards between the pit edges and parts of the machine or equipment, skirt guards shall be installed to remove such hazards, or such other device used to provide equivalent protection.

(k) Every shop transfer car and equipment carriage operating on rails, together with their loads, shall clear stationary machines, equipment, structures, or piled or stacked material, by at least 24 inches.

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(l) Ditches, pits, excavations and surfaces in poor repair shall be guarded by readily visible barricades, rails or other equally effective means.

(m) Existing installations having impaired clearances shall be well posted to indicate the hazards due to such impaired clearance, and shall be guarded by guardrails, barricades, or other means.

EXCEPTIONS:

1. Inaccessible monorails, conveyors, and similar equipment operating on rails.
2. Transfer cars or carriages where the process is such that a minimum of clearance is necessary for safe operations.

NOTE: Authority cited: Section 142.3, Labor Code. Reference Section 142.3, Labor Code; and Section 18943(c), Health and Safety Code.

SUMMARY AND RESPONSE TO COMMENTS

SUMMARY AND RESPONSE TO ORAL AND WRITTEN COMMENTS

I. Written Comments

Mr. Sam Iler, Chair, AGC San Diego Safety Committee by letter dated October 14, 2002.

Comment #1:

Mr. Iler objected to the proposal to effectively relocate the provisions of CSO Section 1513(g) into GISO Section 3273. Mr. Iler stated that falling object hazards in the construction industry are unique and very different from those in general industry and that they cannot be addressed by a “one size fits all” regulation. He opined that the means, methods and environment of the respective industries preclude common regulations for both.

Response:

After consideration of Mr. Iler’s concerns and comments, the Board agrees with his comments regarding the proposed relocation and proposes to withdraw CSO Section 1513(g) from the scope of this rulemaking.

Comment #2:

Mr. Iler commented on requirements for securing materials, equipment and tools aloft against accidental displacement when not in use which are proposed in GISO Section 3273(e)(1). He stated that this requirement would make it impossible to construct a building due to large numbers of tools, materials and equipment used in construction. Furthermore, he stated that barriers at building perimeters are already regulated by CSO Section 1621 (railings and toeboards) and that, in his opinion, additional barrier regulations are unneeded.

Response:

The original proposal required tools, material, and equipment to be secured when not in use. Alternatives were available which included provisions such as, but were not limited to, barriers and warning signs at the perimeter of the affected work area below. However, after considering Mr. Iler’s comment, the Board agrees that modification of Section 3273(e)(1) is necessary. The Board proposes to modify Section 3273(e)(1) to list safeguards for protecting employees from falling objects based on Federal OSHA 1926.501(c). The safeguards include, but are not limited to, guardrail systems, toeboards, screens, canopies, or physical barriers to prevent entry into the area of exposure. By virtue of being in the GISO, these alternatives will apply to all industries; however, vertical standards will take precedence for the construction industry where inconsistencies may be found to exist.

Comment #3:

Mr. Iler expressed concerns that he thought proposed subsection (e)(1) would require “all objects aloft...including materials, equipment, and tools...to be secured against accidental displacement...by wind, or other foreseeable or unforeseen forces.” He commented that an employer does not have direct control or influence over unforeseeable circumstances.

Response:

This comment appears to have been based on text found in the statement of specific purpose in the Initial Statement of Reasons, but not in the proposed regulatory text. Staff agrees with Mr. Iler's concerns and has modified subsection (e)(1) to address those concerns.

Comment #4:

Mr. Iler commented on requirements of subsections (a), (b), (c), (d), and (l) of Section 3273 which he felt are unnecessary since they are either inapplicable or are regulated elsewhere in the CSO.

Response:

No changes are being proposed to Section 3273(a), (b), (c), (d), and (l), as they are currently adopted, and changes to these sections would be outside the scope of this rulemaking. Should Mr. Iler wish the Board to consider changes to these sections, he may petition the Board for a separate rulemaking action.

Comment #5:

Mr. Iler commented on Board staff's determination that the proposed regulations will have no cost impact on the regulated public and requested copies of the review documents, calculations and any other documentation to support these conclusions.

Response:

The Board recognizes that certain provisions of the original proposal may have had an unintended cost impact; however, Board believes that modifications made in response to public comments have addressed these concerns. Concerns about economic impact have been addressed by further clarification of alternatives available for compliance in GISO Section 3273(e)(1) and by modifications to Section 3273(f)(2). The Board therefore believes that the proposed regulations as modified will have no economic impact.

The Board thanks Mr. Iler for his comments and participation in the Board's rulemaking process.

Mr. John Vocke, Attorney – OSHA Compliance, Pacific Gas & Electric Company, by letter dated October 16, 2002.

Comment:

Mr. Vocke stated that PG&E generally supports the proposed regulations; however, he took exception to the requirement of Section 3273(f)(3) that would require signs at all work locations where there is an employee exposure below an elevated work location, whether or not materials, equipment or tools are lowered in a controlled manner. PG&E requested that the requirement for signs be limited to the perimeter of work areas where controlled lowering is not practical; otherwise, in the electric utility work environment, a warning sign would be required at the base of each pole that is scaled by a line worker, even if objects are lowered in a controlled manner.

Response:

The Board agrees with Mr. Vocke's observation that warning signs are unnecessary where objects are being lowered in a controlled manner, and has modified Section 3273(f) to indicate that warning signs will only be required where controlled lowering is not practical, or would subject employees to a greater risk of injury.

The Board thanks Mr. Vocke for his comment and participation in the rulemaking process.

II. Oral Comments

Oral comments received at the October 17, 2002 Public Hearing.

Mr. Steve Johnson, Director of Safety and Compliance Services, representing Associated Roofing Contractors of the Bay Area Counties, Inc.

Comment #1:

Mr. Johnson stated that, due to differences between construction processes and general industry, the Association is opposed to the proposal to effectively relocate the provisions of CSO Section 1513(g) into GISO Section 3273.

Response:

The Board agrees with Mr. Johnson's comment regarding the proposed relocation of CSO Section 1513(g) and proposes to withdraw CSO Section 1513(g) from the scope of this rulemaking.

Comment #2:

Mr. Johnson commented on the GISO Section 3273(e) requirement that all objects must be secured on the roof. He said that this wording leaves employers open to the interpretation of Cal/OSHA inspectors as to what is secured and what is not.

Response:

Although the original proposal included alternatives to securing materials on the roof, the Board agrees with Mr. Johnson's comment to the extent that Section 3273(e) has been reformatted and modified to list acceptable means and methods for protecting employees from falling objects based on Federal OSHA 1926.501(c). See previous response to Mr. Iler's comment #2 for further details.

Comment #3:

Mr. Johnson commented that Section 3273(f)(1) requires all objects to be lowered in a controlled manner by hand lines, material handling equipment or enclosed chutes. He said that this requirement will be a big problem for roofers and that it isn't feasible in roofing tear-off, particularly in residential roofing.

Response:

The original proposal contained an alternative [3273(f)(2)] to the requirement for controlled lowering; however, the Board agrees that clarification would be helpful for the regulated public. Therefore, the Board proposes to add “or” to the end of Section 3273(f)(1) to clarify acceptable precautions when controlled lowering is not possible.

Comment #4:

Mr. Johnson commented that 3273(f)(2) will require a spotter during the entire roofing tear-off operation and that since most employers work on a close profit margin, this would be a costly burden.

Response:

The original proposal only required a spotter when barrier tape was used to prevent access to the drop zone since the advisory committee was concerned that barrier tape alone would not be an effective barrier. However, lacking supporting evidence that a spotter is necessary to secure the drop zone, the Board agrees that modification of Section 3273(f)(2) is necessary. The Board proposes to modify this subsection to eliminate the requirement for spotters and to clarify additional alternative means and methods available to secure the drop zone.

Comment #5:

Mr. Johnson stated that Section 3273(f)(3) requires employers to post warning signs but that it is unclear what the signs should say and what is required for compliance.

Response:

Section 3273(f)(3) has been relocated into Section 3273(f)(2)(A). The requirement for warning signs is consistent with the requirements of CSO Section 1513(g) upon which the proposed modified Section 3273(f)(2) is based. Furthermore, the Section contains a cross-reference to GISO Section 3340 for requirements for warning signs. GISO 3340 contains performance-oriented requirements for warning sign approval, shape, color, and text. The Board therefore declines to make any changes based on this comment since the proposal contains performance-oriented standards which are preferred by a majority of the regulated public.

The Board thanks Mr. Johnson for his comments and participation in the Board’s rulemaking process.

Board Member Victoria Bradshaw, Management Representative, Occupational Safety and Health Standards Board.

Comment #1:

Board Member Bradshaw inquired about the necessity for the rulemaking and commented that the rulemaking should not be in response to a single incident.

Response:

The necessity for the rulemaking was discussed and established by consensus at the May 18, 2002 Advisory Committee. In addition, the rulemaking process addresses issues where California standards are not at least as effective as their Federal counterpart.

Board Member Liz Arioto, Management Representative, Occupational Safety and Health Standards Board.

Comment #1:

In response to concerns raised by Messrs. Johnson and Vocke, regarding various issues relating to proposed changes to the Construction Safety Orders the General Industry Safety Orders (see comments above), Board Member Arioto suggested that the advisory committee be reconvened. Board Member Art Murray concurred with Board Member Arioto's suggestion.

Response:

Board Staff has determined that reconvening the advisory committee would likely prevent conclusion of the rulemaking within the one-year time limit prescribed by the Administrative Procedures Act for the rulemaking notice, thus necessitating a new rulemaking process. Board staff has contacted Messrs. Johnson and Vocke, and obtained their consent to attempt to respond to their concerns by way of a 15-Day Notice of Proposed Modifications. Board staff has consulted with the commenters and believes the issues raised at the Public Hearing have been resolved via modifications to the language as originally proposed. This is reflected in the 15-Day Notice of Proposed Modifications. Staff requested and received consent from the Board to do so at the November 21, 2002 Board Meeting.